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UNITED STATES REVENUE COMMISSION.
Special Report No. 12.

REPORT

ON

IRON AND STEEL.

TREASURY DEPARTMENT:
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REPORT ON IRON.

OFFICE OF THE UNITED STATES REVENUE COMMISSION,
FEBRUARY, 1866.

Hon. HUGH McCULLOCH,
Secretary of the Treasury.

SIR: The production of iron in the United States during the last twenty-five years, the development of vast deposits of iron minerals and of fuel, demonstrate the capacity of the country to manufacture the whole quantity required for its progress in other manufactures, for the production of machinery and all other instruments of industry, and the continuous enlargement of its productive powers. Our natural advantages for the production of iron, and steel, and other great instruments of production, are not surpassed in the world. Our progress shows that we have learned to avail ourselves of these advantages. Ultimately, under a wise domestic policy, we shall become the largest producers of iron, and perhaps the largest exporters, as many of our mines are near the seaboard, and can furnish large quantities more promptly than any country except Great Britain, and better and more varied qualities than any country.

It must be long, however, before it can be our interest to send iron from our shores. The race for national power and wealth will be indicated, not so much by our advance in the production of iron, as by its consumption. Our industry can never grow to its full height but by that profusion of machines and implements of production and facilities for transportation which iron only can furnish. England now employs iron to the extent of 160 lbs. per head of population, and exports considerably more than she consumes. We manufacture 1,500,000, and import about 300,000 tons. Our consumption does not yet exceed 120 lbs. per head. But considering the intelligence of our population, its activity, its ingenuity, its proclivities to the employment of iron, and the very superior quality of our iron, we may reasonably expect to reach a consumption of 160 lbs. per head, by the time our population numbers forty millions, making the whole product then equal to 3,200,000 tons.

The production of iron will, in a few years, be distributed throughout the whole country. The materials are in all the great departments of our territory; east and west, north and south; wherever these materials are found, and where the laborers and the food can be found, the people will be greatly wanting to their pecuniary as well as all their economical interests if they do not devote a portion of their labor to their conversion into iron, which admits of transportation to every State, and is in universal demand. That is, the labor and the food which enters into the production of iron, becomes available in the purchase of other commodities throughout the whole country.

It is very well known that the State of Pennsylvania could, by no means of her own, import yearly 50,000 tons of iron, but her mines, labor, food, and capital, can now furnish yearly 500,000 tons, worth over thirty millions of dollars; and can now, by the further aid of machinery, carry the value of this iron to sixty or eighty millions. Thus the people of Pennsylvania can by this medium exchange her minerals, labor, and food, for the labor and food and other raw materials of other parts of the country. The labor, the food, and the raw material of one part of the country combined by manufacture, become thus commodities exchangeable in all other parts, for other commodities, made up by similar combinations. The raw materials may differ, but the labor, skill, and food, effect a transformation into that which becomes equivalent to money, in places where neither the labor, nor the food, nor the raw material could be transported. The agricultural products which farms can produce in greatest quantity, cannot be carried far; corn, therefore, and grass, and root crops, if they have not a market close at hand, must be worked up into hogs, or horned cattle, or horses, or mules, or iron, lead, cloth, or something else which can be driven or carried into market. But making pork, or beef, or growing horses and mules, is not to be compared, in point of public or private advantage, with those branches of industry which convert the products of the soil, by means of human and skilled labor, aided by machinery, into commodities for distant markets. It is only by such means that a whole population finds employment, and that labor, skilled, intelligent labor, can be carried far to market. The value of a man's labor in a community where manufactures are duly blended with agriculture, that is, where in close proximity these branches of industry support each other, is more than five times greater than in a purely agricultural district. The value of farms, gardens, and orchards, in the United States conforms closely to the distance from those who consume their products.

Farms, gardens, and orchards, realize five to ten times more from a market not over five miles distant, than from that which is several hundred miles away; the product of the land intended for a near market, being of five times greater value per acre than that which is raised for a distant market. The pig iron of Missouri can be sent a thousand miles by water to Pittsburgh for a market, but the farm products consumed in the production of the iron cannot, much less those of the garden, and orchard, and butchers' stalls.

When Missouri shall take from her mines the material to increase the sum of her manufactured products from forty to eighty millions in value, the farms of that State will have risen from thirty-eight to seventy-five dollars per acre, and personal property will have increased not less than four times its present quantity and value.

Massachusetts and Missouri are nearly equal in population, the latter having fifty thousand less. The former has over two hundred thousand hands engaged in manufactures, the latter over nineteen thousand. Including the number dependent upon those engaged in manufacturing, Massachusetts has half her population so engaged, or six hundred thousand; if Missouri had half her population thus engaged, her farm lands would be worth one hundred dollars; intrinsically, they are worth double those of Massachusetts; but with such a market within her own borders as half a million of manufacturers, the farms would readily sell for $100 per acre. The product of the manufactures in Missouri is now nearly of the value of $42,000,000, or $35 35 per head; that of Massachusetts is $255,545,922, or $207 58 per head. The average production of manufacturing industry per head of the entire population of the United States is about $60 per head. Massachusetts exceeds that average $147; Missouri is $25 below it. The natural advantages of Missouri in climate, soil, mines, minerals, with the advantage of the whole Valley of the Mississippi for a market, and free navigation to every portion of it, opens for her a career of successful industry, which must leave every State of New England very far behind.

The States possessing in abundance mines and minerals, for the production of iron and steel, should not hesitate as to the direction which should be given to their industry. Men have neither planted nor cultivated these minerals; they do not grow; there is no waiting by man for a new crop of raw material. Nature has done her work, and is not to be asked for further assistance. The crop is always ready to be taken in and prepared for immediate use. Every step is one of labor, skill, and science. Every stage of the business requires intelligent and scientific supervision. The employment is continuous. The products are among the most important necessaries of life—products necessary to national power and civilization. So far as the highest interest of industry, the permanent interests and welfare of the working classes are concerned, no industry is of such essential utility as the working of mines, and the production of metals. They are indispensable to progress in all other departments of labor. They are equally necessary in peace and war to the national strength at home, and national respect abroad. Mining and metallurgy, if carried on as they should be, will support one-fifth of our population, and furnish materials needful to the various branches of industry which support the remaining four-fifths.

The product of iron is now not one-half what it should be; not one-half what it would have been, but for the excessive fluctuations in price caused by foreign competition. The over-production of iron in Great Britain makes the price there very variable, and the fluctuations there are thrown upon our markets, in addition to those incident to our home manufacture.

The injury done to the home production of iron by the manner in which foreign iron is thrown upon our markets, is many times as great as the whole value imported. The American manufacturer cannot encounter variations in price with as little loss as the British maker.

As a branch of national industry, the manufacture of iron has been eminently creditable; the country has been greatly enriched and benefited, but it would be easy to show that, as a whole, it has largely enriched only a small portion of the individuals engaged in it. As much money has been lost as has been made by it. It is a lottery in which large prizes have been drawn, but the blanks have been more numerous than the prizes. The public has the full advantage; individuals bear the burden and the loss.

These individual losses are due to various causes, which should not be overlooked in estimating the progress of this manufacture and its prospects. The country has but partially overcome the checks which met the pioneers in the production of iron—the want of capital, of skill, and of experience. It could not be expected that such requisites were attainable without much delay. Our progress seemed, to national impatience, slow and unsatisfactory, but now our advance appears to be all that should have been hoped.

Our knowledge of iron manufacture will not suffer now by comparison with that of any other people. The supply of capital to aid those who are thus engaged is still deficient, but the success of a few, has been sufficient to attract to the business those who have carried the production of iron very rapidly to its present quantity. The excessive fluctuations in price have severely tried all who have engaged in it, as may be seen by tables of English and American prices annexed to this report.

The history of the manufacture of iron in this country reveals, as does that of many other branches of industry, a striking characteristic of the American mind in its tendency to mechanical pursuits. No country ever rose so rapidly into manufacturing eminence, and no people ever suffered so much pecuniarily to attain it. In Great Britain, and on the continent of Europe, long apprenticeships were considered necessary to the attainment of skill in a mechanical pursuit. In many countries expensive and tedious preliminaries had to be encountered before men were permitted to set up as masters in a business. All that has long ago been disregarded here; men with little hesitation engage now in all kinds of business, even those demanding the highest skill and scientific acquirements, make large investments, and spend years of toil and anxiety to perfect a business by the hard and losing road of oft-repeated trials and failures, and by dint of costly experience. In a vast number of cases, great establishments, on which hundreds of thousands and even millions have been expended, have been sold owing to failure of the first owners, for a tenth, or other small proportion of their cost, and become profitable only to the second proprietors.

The result has been that our operatives have left the old ruts and struck out new paths, and while they have gained largely in new ideas, new processes, and new machinery, they have in their progress been able to look around the world and gather up what is best in the old paths. In the main this has been the method of all our great manufactures, and most of the lesser employments, and it is palpable that very great advantages have resulted. The inventive power of the country has been stimulated in an extraordinary degree. The nation owes no small debt to the long list of men who for half a century have given all their means, all their talents, and years, if not a life-time, to build up and establish an American manufacturing system, which gave to the most of them for its chief reward the satisfaction of being regarded as public benefactors.

The productive power of the country, and of course its ability to endure heavy taxation, may be measured here as well as in every other population by the quantity of iron consumed. Without machinery, implements of husbandry, tools for all trades, and instruments of production of every kind only supplied by iron, no high rate of production can be reached. The value of a million of tons of iron as it enters into consumption is at least a hundred millions of dollars. All branches of industry not only profit by the use of this iron, but they profit by what they are called upon to furnish in aid of its production. They can all supply themselves fully at home with this indispensable article by exchanging for it, directly or indirectly, the products of their own industry, and thus this exchange may go on indefinitely, the production of iron increasing with the increasing population, until the product reaches or exceeds the quantity made in Great Britain—six millions of tons.

If we import our metals from Europe our consumption will not be on the scale of the needs of our civilization and of our industry, but on the scale of our ability to pay; that is, upon the scale of what Europe is willing to take from us. Whether as a people we can consume half a million, a million, or two millions of iron annually, will depend upon circumstances in Europe, such as the state of the weather, the harvests, and the fluctuations of commerce. But our home industry can furnish an indefinite and increasing quantity, meeting the utmost demand, and at a just price; that is, a rate adjusted to the price of labor in the country. If the rate is high the payment is easy, for there is no medium more abundant than that which is used to pay for the production of iron. We can be large consumers of iron manufactured at home, whatever the price; we cannot import half the quantity we should use, however cheap.

It is the exchange between the labor that makes the iron and the labor that furnishes the food, the clothing, the dwellings, and the furniture, that affords means to pay taxes. Through the employees and the creditors of the Government, money disbursed by the public treasury returns after a short time to the same channels from which it was withdrawn by taxation. The persons who receive this money make the same use of it which others do who receive their incomes from other sources. The main current of the medium of exchange, whatever it be, is towards those who produce food and raiment, and other necessaries of life. It is from this current that the amount of the taxes is taken, not to be permanently diverted from its course or destination, but to be returned after the delay of a few weeks or months to the same stream and the same destination. The sum abstracted from the earnings of domestic labor changes owners many times, but flows on until finally absorbed as compensation for labor and its products.

If the States be taken separately, it will be found that they are able to pay taxes precisely in proportion to the exchanges produced by their industry. If one-half the population is engaged in manufactures and mechanical employments, their labor is virtually exchanged for labor, and the exchange is rapid and large. Massachusetts, with nearly half her population dependent upon manufactures, pays over fifteen millions of dollars in taxes; Missouri, with about the same population, with a far more favorable climate, a better soil, three times as much of it in cultivation, and vast mineral resources, but with only a twentieth of her people dependent on manufactures, pays less than a third of that amount.

If the industry of Missouri were so diversified as to give employment to her whole population, and bring about an exchange of products corresponding to her natural advantages, that State could pay twenty millions for taxes with less exhaustion than four millions now.

The difference between taxing home production and foreign will be seen in this, that by imposing a duty of from ten to fifty per cent. on foreign products the Treasury realizes one hundred and thirty millions, whilst domestic taxation, by a charge of from one to six per cent., produces over two hundred millions.

A careful estimate has been made of the articles purchased by 150 men and their families, out of the wages received for making 1,000 tons of iron rails from the ore at present rates:

For such articles as tea, coffee, sugar, molasses, candles, oil, matches, soap, vinegar, brooms, coopers' ware, medicines and doctors' fees, hardware, queensware, &c	$12, 000
For coarse muslins and hosiery, checks, calicoes, ginghams, cloths, cassinets, flannels, made-up clothing, boots and shoes, all of domestic manufacture	18, 000
Beef, pork, veal, and mutton	10, 000
Bread, corn and wheat, vegetables and fruit	15, 000
Beer, whiskey, tobacco, &c	7, 000
Sundries	3, 000
Savings of the laborers	8, 500
Profits of manufacturers	6, 500
	$80, 000

This is the way iron is paid for when at home, and this statement shows that there is no limit to the quantity which may in this manner be brought into consumption.

It is in striking contrast with the mode of supplying the country with iron from Great Britain. Of the items thus converted into iron none will be received there for iron except wheat or flour, when it may happen to be wanted. The importance of this exhibit is not chiefly in the fact that the value of a thousand tons of iron rails has been created, but largely in this, that it has not only furnished a living to the 150 hands employed and their families, but to as many more in other branches of industry employed in producing these supplies for the men who took the minerals from the ground and converted them to so useful a purpose as iron rails.

Similar exhibits can be made in every department of American industry, showing that they are all bound together by a mutual dependence, uniting their interests like the links of a chain. The iron is none the less important to the country because the men who made it are paid three times as much for their labor as they would have received in Great Britain, nor is the country the poorer, for all the wages remain in it, and the iron is a clear gain.

We have imported into this country within the last six years at least one million tons of iron, at a cost to the consumers of not less than fifty millions of dollars. This iron would have cost at home from seventy to ninety millions in our currency, but the manufacture of it at home would have furnished a market for thirty-five millions worth of our agricultural products, of that kind which gives the largest profit to the cultivator, tends to raise land to its highest value, and yields a market for the home products, to the value of twenty-five millions more. Our working men have lost the advantage of making it out of our own materials. Nearly half our furnaces on this account stood still for a large portion of last year, whilst the British farmers were feeding and British manufacturers were clothing the men, who were making at least a fourth of the iron thus imported.

If our industrial policy were such as not to permit any damaging or destructive competition with foreign cheap labor in the production of staple articles of clothing, such as cotton, or woollen, or flaxen, or leather goods, or such things as iron or steel, or other metals, or articles of which they are the chief materials, or other staples needful to national independence and self-respect, there would always remain a large variety of commodities of foreign manufacture which our people would import to the full value of what foreign nations would take of our products. The largest foreign trade would assuredly grow out of the largest domestic production, because that would most increase our ability, both for importation and exportation.

In the progress of British iron manufacture it enjoyed special a advantage denied to the American manufacturer, who has suffered constantly under the reproach of requiring so much legislative aid. It had the unwavering support of the Government, and the benefit of high prices in all iron-producing countries, as the following sketch will show:

The first duty upon iron imposed by the English government, was ten shillings per ton, in 1679. In 1710, it was advanced to £2 1*s.* 6*d.* per ton, in English vessels, and in foreign vessels to £2 10*s.* 10*d.*

In 1777, 7,525 tons of iron were imported into England from America.

In 1782, the duty on iron was raised to £2 16*s.* 2*d.* The price of iron at that time was from £17 to £18 per ton, ($85 to $90.)

In 1785, the export of tools, engines, models, or plans of machines used in the manufacture of iron was prohibited, under a penalty of one year's imprisonment, £200 fine, and a confiscation of the articles shipped, or intended to be shipped. The same fine was to be inflicted on the master of the vessel and the custom-house officers, who were to be dismissed, and be thereafter forever incapable of holding any office. For enticing workmen away, the penalty was one year's imprisonment and £500 fine for every workman so enticed, the fine to be doubled for the second offence.

In 1787, the importation of iron less than three-fourths of an inch square, and all wrought iron, except plain bars, and all manufactures of iron and steel, were prohibited.

In 1795, the act prohibiting the export of tools and machinery was made perpetual.

In 1796, the duty was raised to £3 1*s.* 9*d.* per ton. The whole amount then produced in Great Britain was 124,879 tons per annum, from 121 furnaces.

1797. The duty was raised to £3 4*s.* 7*d.*

1798. The duty was increased to £3 15*s.* 5*d.*

1802. There were 168 furnaces, producing 170,000 tons.

1803. The duty advanced to £4 4*s.* 4½*d.*

1804. The duty was raised to £4 17*s.* 1*d.*

1805. The duty was raised to £5 1*s.*

1806. The duty further advanced to £5 7*s.* 5¾*d.*

1809. The duty further advanced to £5 9*s.* 10*d.*

1813. The duty further advanced to £6 9*s.* 10*d.*

1818. The product of iron was estimated at 300,000 tons.

1819. The duty, if imported in English vessels, was £6 10*s.*; in foreign vessels £7 18*s.* 6*d.* Iron slit or hammered into iron rods, or drawn, or hammered less than three-fourths of an inch square, were charged with a duty of £20. Iron not enumerated, heretofore prohibited, admitted at a duty of 50 per cent. Hoops heretofore charged £11 8*s.* 4*d.* per ton, were now charged £23·15*s.*

1820. The product of this year was estimated at 400,000 tons.

1825. The price of iron in various countries was as follows:

France (per ton)	£26 10*s.*	Russia	£13 13*s.*
Belgium and Germany	£16 14*s.*	England	£10
Sweden	£13 13*s.*		

1826. The duty on bar iron was reduced to £1 10*s.*; that on hammered rods from £20 to £5. Hoops remained at £23 10*s.* Pig iron at 10*s.*

The English government thus advanced the duties upon iron fifteen times during a space of 147 years in all, from ten shillings, or $2 50, in 1679, to $35 in 1820, always under specific duties.

We subjoin a list of countries to which iron was exported at this time, arranged in the order of the quantities taken by each.

In 1830, the United States became the largest customer, and so continue to this time.

	Tons.
Asia	12,631
United States	12,491
Italy	9,435
France	7,910
British West Indies	6,908
North American Colonies	6,067
Portugal	6,067
Netherlands	4,759
Brazil	2,789
Germany	2,615
Foreign West Indies	2,515
Mexico and South American Republics	2,317
Turkey and Egypt	2,273
Gibraltar	1,601
Spain	1,493
Africa	1,411
Malta	660
Denmark	319
Russia	158
Norway	94
Prussia	68
Sweden	10

It thus appears that England had become a large exporter of iron throughout the world before she reduced the high duties, under shelter of which, this manufacture had attained such a remarkable development. England was making iron, in 1826, at a price from 33 to 50 per cent. less than it could be made for in any part of Europe or America. For ten years previous to the reduction of the duties, England exported about nine times as much as she imported, and, of course, no duties were required for the protection of British iron. The iron imported by England at this period was almost wholly from Russia and Sweden, and was intended to be made into steel, and for *other special purposes.*

The heavy British duties were only removed when the manufacturers could afford to sell for less than $50 per ton, or one-third less than it could be produced for in any other country. The British manufacturer never had a competitor having the power to injure him; he never dreaded one. It was strictly home competition that made the British iron the cheapest in the world.

Such fluctuations in the price of iron as have cost the American manufacturers hundreds of millions, were there never feared nor felt. Of course the progress of the manufacture was steady while the market was covered by high duties, and after their repeal in 1826, the markets of the world were secured by the ability of the British maker to sell iron at less than one-third what it could be made for elsewhere.

The advantages of ore, fuel, and other material in this country, the knowledge and skill in the art, the perfection of our machinery, and our processes of manufacture, all prove beyond question, that iron and steel can now be produced, averaging equal, in all respects, to any made elsewhere, at a price as low, making allowance only for the difference in the price of labor in Great Britain and the United States. The practical difficulties of manufacture have been overcome, leaving to be surmounted only such as are economical or pertaining to the higher position of labor in the United States.

How can the nation then obtain the needful quantity of iron—by purchasing in Great Britain, or by making it at home? Our imports of iron have seldom exceeded 300,000 tons. Our consumption is nearly a million and a half tons, with a rapidly increasing demand. If the latter quantity of iron were to be shipped hither, freights would much more than be doubled; for 1, 500 cargoes of 1, 000 tons each, higher freight would have to be paid. Under such a vast demand prices would go to more than double the low rates which make British iron so tempting, and would continue to advance so long as such a demand continued, and the cheap market would no longer exist. The only way to keep British iron cheap is to let it accumulate on the hands of the makers. And the only way to do that is to make the manufacture as effective at home as possible. This is the conclusion to which every careful view of the subject leads at last, by whatever path of inquiry the subjects of home and foreign industry are considered.

To manufacture a million and a half tons of iron in this country, circulates a hundred millions of dollars among the people, it supports great masses of population, it builds towns and villages, it adds largely to the value of farms, it affords a market for at least forty millions in value of agricultural products. To make this iron at home creates a vast addition to the national wealth, and all the machinery and new inventions introduced and employed, and all the skill attained, constitute so much capital and productive power to enlarge the basis of taxation.

This increase of domestic wealth does not occur upon commodities produced for exportation. That department of industry is already in advance of demand with respect to most commodities. We have always more commodities for exportation than foreign countries will take at remunerating prices. Our industry, as applied to articles of export to Great Britain, cannot profitably be enlarged; it rests not merely on our capacity of production, but on the capacity or willingness of Great Britain to receive at full prices. It is obviously our better policy to produce the great staples of our consumption, for which our ability is without bounds, and reserve the proceeds of our exports to pay for such a selection from the varied manufactures of that country, as may best suit the taste of our people and the wants of our industry. There must always be in the multifarious products of British manufacture, a great variety of commodities suitable for our consumption, and we can never sell to a greater value of our products in British markets, than will pay for that variety. To import our iron would simply limit this trade.

If, on the other hand, iron is made at home, so are the commodities which go to pay for it, and the parties to this double production may proceed to the utmost of their productive power, and until home competition effects here what it has done in Great Britain—makes iron as cheap, the difference being taken into account, as it is in that country.

Iron is more than ever an indispensable element in a strife between nations. Our late terrible war proves that no choice is left; the nation that would be strong must have unlimited command of iron, and every possible skill in employing it. It is not enough to possess mines of iron and fuel, if they are not made continuously efficient. Mines cannot be made productive at once. Skilled workmen cannot be made at once. Immense establishments adequate for the work of national defence, cannot be provided for a sudden occasion. It is plain to any observer that the heavy armaments which helped to end the rebellion, could not have been produced in this country but for the support which the manufacture of iron has received from the Government for the last half century. But if that support had been more steady and efficient, the advantage to the nation, its armies, its navy, forts and arsenals, would have been far more than proportionably advantageous. The iron manufacture of this country will never attract the capital it needs, nor attain the success it deserves, until it is felt that it is out of danger from the competition of the cheaper labor of Europe.

Respectfully submitted.

STEPHEN COLWELL.

We repeat here some statements from a paper prepared by the writer of this report, and appended to a memorial on the subject of iron, in 1849:

There is a great misapprehension on the subject of the PROTECTION asked for industry. The term is ill-chosen, because it implies special favor granted to particular branches of manufacture. But it is far from being a mere concern of individuals; it is equally a matter of public policy. Suppose the makers of iron in Great Britain and the United States to have equal advantages, and that the manufacture is carried to the utmost extent and the lowest point of remuneration by the home competition in each country; and that the average price in each is the same. If any state of industry could, with advantage, dispense with protection, it would be the case supposed. But it would be clearly the interest of both countries to be careful of their home markets, even in this case of perfect equality. It would be sound policy to keep the manufacture of an article so important as iron in prime vigor and progress, that the quantity might be increased, and the price reduced by the gradual process of home competition, which, in a protected market, is a severe but sure operation. One of the greatest trials the manufacturers encounter in such cases is that fluctuation which occurs every few years in all mercantile communities. To bear up under all these, and maintain the full vigor of production; is a hard trial upon makers of iron, the more so, as in their case their expenses do not admit of being abridged, nor can their manufacture be diminished under a limited demand without heavy loss. Seasons of depression must come in both countries in the case supposed—periods when the markets of each would reject, and be unable to consume the ordinary quantity. It must be thrown somewhere, for neither makers nor merchants are able nor willing to hold the surplus of the iron until business recovers its tone and makes its usual demand. If the iron thus remaining on hand in Great Britain is thrown into our markets, it will wholly break them down if firm, and increase and continue the depression if already down. Between the two countries, while prices were up, there would be no transactions in iron, but the conflict would be incessant in periods of depression. It may be safely assumed, however, that without help the manufacturers could never recover from such a conflict; a few years would end the struggle by prostrating a large portion of those engaged. The business would have to be reorganized.

It would be sound policy, therefore, to shield each of these markets from the irregularities of the other. This course is best for the makers of iron, as well as for those who are special consumers, to whom it insures, in the long run, the cheapest supply.

Foreign Iron.—Its influence on prices.

As every country is dependent mainly on its own industry for its supplies, it is important that the industry which furnishes these supplies should be sustained. The prices of the nine-tenths furnished at home should range at such rates as to keep the production active and increasing. Unless it can be demonstrated that the whole supply could be permanently imported cheaper, it would be suicidal to extinguish the industry on which we are dependent for nine-tenths, in a vain experiment to purchase cheaper elsewhere. The prices in the home market should be such as are made by fair competition in the home market, in which all parties interested can take care of themselves. If our iron is made at home, all the labor which goes into the cost should be adequately compensated; the farmer who furnishes food for man and horse, the manufacturer who furnishes raiment, the laborer and the operative who are immediately employed in the production—all these and the consumer must settle the price; the elements are among them, and their combined action must maintain a result the nearest to justice, because they all look to their own interests.

It is unjust and unwise to disturb and change this result by introducing a new element in a supply derived without restriction or regulation from foreign trade. Upon that trade we are not in any sense dependent for pig and bar iron; we should, indeed, at this time, be makers and consumers of a much larger quantity than we have yet used, if we had not imported a ton of iron the last twenty years. We make the *quantity* we consume much cheaper than we could import it. Is it just that the tenth of our consumption which we import, should regulate, to the injury of the makers of the other nine-tenths, the prices of iron in this country? Yet the price is for the most part controlled by the movements of foreign trade. It happens that our seaports are also the chief markets for distribution of our domestic iron. The prices of every country or district are made at its chief markets. If the consumption of iron on the seaboard is 300,000 tons per annum, the import of 50,000 tons foreign iron will control the prices, because it comes in to be sold for what it will bring. It is at once offered below the domestic article, and consumers, seeing a disturbing cause in the market, pause until the effect is seen. A pause in the purchase of iron produces a fall, because some sellers must realize, and buyers take the advantage and keep it. The whole mass of the domestic iron is brought to market to keep pace with consumption, and the price demanded is a remunerating rate, and unless this is obtained the business must perish. The quantity imported is a mere overplus—a remnant from British markets, the sale of which at high or low rates is not a very important or vital matter to the manufacturers who sent it. At most it is but ten per cent. of their product, and may be considered as their profit, greater or less, as sold. What is vital to them is their *home price;* if that is fair on the average, they can afford to risk ten per cent. of their production in our market. Let any one who knows how prices are made to vary, not only by actual events, but by rumors and suspicions, reflect upon the effect of an additional ten per cent. of a foreign article thrown in upon a previously balanced market, and he will perceive not only the necessary depression but the injustice of it to the industry affected.

But there is a feature in foreign trade which greatly increases the mischief of leaving the market under its control. It is to a most extraordinary degree uncertain and fluctuating. The importing merchants are governed in some degree, doubtless, by the actual demand, and their imports might, if exhibited, separately show some regularity. But a large portion of the imports are sent upon speculation, and the quantity depends on markets abroad and the thousand contingencies which may determine a larger or less export to our shores. The irregularity of our imports of iron from Great Britain is so striking as to demonstrate the impolicy and injustice of making the prices of the domestic product subservient to it. Beginning with the year 1820, coming down to 1845, and leaving out the fractional hundreds, the following figures exhibit the number of thousands of tons of iron of all kinds imported into the United States from Great Britain each year in its order:

Year.	*Tons.*	*Year.*	*Tons.*	*Year.*	*Tons.*
1820	8, 000	1830	21, 000	1840	72, 000
1821	9, 000	1831	41, 000	1841	112, 000
1822	15, 000	1832	45, 000	1842	107, 000
1823	13, 000	1833	62, 000	1843	38, 000
1824	11, 000	1834	47, 000	1844	102, 000
1825	13, 000	1835	63, 000	1845	68, 000
1826	12, 000	1836	91, 000	1846	....
1827	21, 000	1837	54, 000	1847	....
1828	22, 000	1838	78, 000	1848	....
1829	17, 000	1839	85, 000	1849	315, 000

These figures show a variation in the supply of iron derived from Great Britain of from 10 to upwards of 200 per cent., between one year and the next. Small as this quantity appears, compared with our whole consumption, it would always control the prices in New York, and thence those in the country. How little these fits and starts of commerce are like the sober pursuits of industry at home, where the annual product only varies to increase with the gradual increase of labor, capital, and consumption.

How can it be just to make the laborer's wages depend upon the variable movements of foreign trade?

The iron market in Great Britain affords a spectacle of fluctuation and speculation which has scarce any parallel. The range of prices varies from below the cost of manufacture to 150 per cent. advance upon the actual cost. It has been with British manufactures, for the last twenty years, a constantly recurring feast or famine. Iron being an article not subject to deterioration, it is deemed safe to hold, and speculators step in when prices are at the lowest. Not only so, but at extremely low rates iron enters into a large consumption for which it is too expensive at higher rates. At the low rates this increased consumption begins; contracts are made, enterprises are commenced, plans and estimates are gone into, which produce at last an effective demand for iron, sufficient to enable makers and holders to advance the rates in proportion to the wants of buyers, who hasten to supply themselves when the advance begins.

These fluctuations in price cannot be wondered at if we note the progress of the manufacture. The following is the estimate of the quantity produced in the years named:

		Exported to all the world.	
Year.	*Tons.*	*Tons.*	*Consumed.*
1810	294, 642	....	....
1820	368, 000	91, 766	276, 234
1825	581, 367	69, 328	....
1830	678, 417	130, 417	....
1835	1, 000, 000	219, 203	....
1840	1, 500, 000	268, 328	1, 231, 672

The increase in product in 30 years was over 500 per cent.* The increase in the export was less than 300 per cent. The increased consumption was very nearly 500 per cent. There was in that period no parallel to this progress in the world. It is not hard to comprehend the share which this increased consumption of iron had in the *material progress* of Great Britain.

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* The increase in 50 years was 1,000 per cent.

If this manufacture is not overdone in Great Britain, it would be difficult to find any business overdone. It is only possible to keep up this large production through the operation of those fluctuations, by which, in times of depression, the iron is taken into a large consumption at the low rates, and by which the makers indemnify themselves for the losses of one period by the high prices of another. By this system they export largely when they can do no better, and raise the prices so high at times, that exports must be greatly diminished. Upon this system of variation, the makers there thrive; but can these fluctuations be introduced elsewhere with advantage, or even without ruin? They are an incident to over-production there—they are an incalculable injury when brought to bear upon our industry.

As the progress of the manufacture of iron in Great Britain is one of the greatest achievements of industry in modern times, it may be worth while to consider what protection fostered and secured this wonderful growth.

Previous to this growth, pig iron had been scarcely known in commerce. England had no rival in the production of that article that could disturb her markets. The price may be shown thus:

1782 to 1803, 20 years, £3 to £9.
1803 to 1818, 15 years, £7 to £9.
1818 to 1840, 22 years, £4 15*s*. to £11.
1840 to 1849, 9 years, £2 to £5.

It will be seen that down to the year 1840 from 1782, in which period the production of iron in Great Britain had increased from 150,000 tons to 1,500,000, or tenfold, the makers enjoyed a price averaging over £6, and very seldom below £5. Upon this price the business flourished beyond precedent. After 1840, it became evident that there was an over-production, and the British market broke down. The price of Scotch pig, which, after 1840, controlled the market, fell to £2, and even below that rate. It became the subject of speculation and fluctuation beyond any article of commerce.

It was the protection of this continued high price, for fifty years, which stimulated the production of pig iron. The revenue duty of 27½ per cent. was of no consequence; the importations of pig iron were too small to have any effect upon the markets.

Large importations of bar iron were made into Great Britain between 1782 and 1840; but that it may be clearly seen how far this importation interfered with the domestic product, note the prices of Russian and Swedish bars, the only kinds largely imported.

Russian bars.	1782 to 1795, 13 years, from £10 15*s.* to £16.
“	1795 to 1803, 8 years, from £17 to £25.
“	1803 to 1820, 17 years, £12 10*s.* to £22.
“	1820 to 1840, 20 years, £14 to £26.
“	1840 to 1849, 9 years, average £16.
Swedish bars.	1782 to 1795, from £14 15*s.* to £18.
“	1785 to 1803, from £19 to £26.
“	1803 to 1820, from £15 10*s.* to £21.

Since 1820 the average has been about £13.

The above prices are exclusive of duty, which was increased from £2 16*s.* 6*d.* in 1782, by *ten different advances*, to £6 10*s.* (and £7 18*s.* 6*d.* in foreign ships) in 1820.

These prices were indeed in no degree an obstacle to the British manufacturers; they were, in fact, so high that no heavy importations could take place.

The largest importation in any year between 1800 and 1814 of bar iron, was 52,873 tons in 1802; during the nine years of that period the importation did not reach 30,000, and was sometimes below 20,000 tons.

From 1815 to 1840, the largest quantity of bar iron imported into Great Britain, was 25,033 tons in 1836, but the average for the whole period was considerably below 20,000 tons.

The British manufacturers required no legislative aid after 1800, yet such caution was used that the duties were increased from time to time to 1820, and were not removed until 1825.

EFFECT OF FOREIGN PRICES UPON THE MANUFACTURE OF IRON IN THE UNITED STATES.

The British maker had competitors who furnished iron, exclusive of duty, at from $65 to $100 per ton.

The competitor of our manufacturers has furnished bar iron—

From 1815 to 1830 at $50; highest $72, lowest $31.
From 1830 to 1849 at $38; highest $55, lowest $22.

But low as the averages are, compared with those against which the British manufacturer had to contend, they afford an inadequate idea of the destructive effect of this competition. The averages are comparatively high from the excessive range of the fluctuation. For three years, from June, 1820, to July, 1824, the price did not exceed $46, and did not average over $42.

From March, 1827, to July, 1836, the price did not exceed $46.

From April, 1829, to October, 1835, the price did not exceed $37.

From March, 1830, to March, 1833, the price did not exceed $33, and for a year of this period it was under $27.

For three years, including 1841 to 1843, the price was at $24, and during 1842, as low as $22.

It is such prolonged depressions as these which seriously injure, if they do not ruin, the maker of iron in the United States. He cannot meet such exigencies, neither by reduction of his expenditures, by reducing wages, nor by diminishing the amount of his product. He must continue his business at a serious loss for years, or he must stop and be ruined.

It cannot be doubted that these periods of low prices have hindered the progress of this branch of industry to a very important extent. It is scarcely extravagant to say that with the same comparative protection which has been enjoyed in Great Britain, the product here would now have been scarce less than that of that country. If the home market had been equally secure to the makers here, as that of Great Britain was to the makers there, the consumption of iron here might now be 1,500,000 tons. The higher price would have been no obstacle, for where all labor receives a corresponding compensation the price is no obstacle in the exchange of labor. These fluctuations in prices, introduced from Great Britain, have proved an incalculable evil to the whole industry of the country. The fact that a portion of our annual supply has been imported at a very low cost, much lower than it could be produced for here, is no alleviation. Instead of consuming more, we have consumed less. Our consumers say that they work up far less iron at the low rates than when business is proceeding on the basis of home prices.

Extracts from the Statements and Answers of the Manufacturers of Iron in Pittsburgh to the Interrogatories of the Revenue Commission.

"Labor has invested in manufacturing a much greater capital than the owners of the machinery. At present, the average individual earnings of the mechanical and operative masses are understated at one thousand dollars each per annum, a sum not quite equal to the legal interest of $17,000.

"Should the manufacturer realize a net profit of six per cent. on the capital invested, he would realize a little over one thousand dollars on each $17,000 invested. Taking an establishment capable of producing 5,000 tons of finished iron annually, its cost would be in accordance with our previous statements—$625,000. The average number of hands employed in such an establishment would be about 500. Upon these employees would be dependent, at the average rate, 2,500 persons. The average wages paid to these 500 operatives, at $1,000 per annum, would be $500,000. The principal to produce this sum of interest annually would be $8,333,333 worth of labor, the proportion being about one to twelve.

"While labor, then, requires protection more than machinery, in the proportion of twelve to one, the Government also receives it to a larger extent than the manufacturer. The Government receives, as previously shown, $20 98 from each ton of iron, in direct and indirect taxes, and would obtain from the establishment instanced, $104,900. To procure this latter sum by legal interest would require a capital of nearly $1,800,000, being in the proportion of 2⅔ to 1 of the value of the machinery of the establishment from which it obtains the interest of a principal as above stated.

"Is it not, then, for the benefit of labor and the Government, rather than for themselves, that manufacturers appeal for protection against all those products of foreign low-priced capital, and low-priced European labor, that threaten to take from American industry the American market?

"Will the Government fail to perceive that the parties interested in obtaining that protection are, first, the laborer or operative; second, the Government; and lastly, the manufacturer?

"Iron ores are received from Lake Superior, Lake Champlain, Ohio, and Western Pennsylvania. The iron we use comes from Ohio, Missouri, Tennessee, Kentucky, Michigan, Pennsylvania, Virginia, Maryland, and New Jersey.

Average cost of ores in 1860	$6	to $6½	per ton.
" " " 1864	13	to 16	"
" " " 1865	13	to 15	"
" " pig iron in 1860	21½		"
" " " 1864	55		"
" " " 1865	56		"
In 1860 blooms cost	56		"
1864 "	123		"
1865 "	140		"

"Capacity of rolling mills in Pittsburgh, 300,000 tons, being 150 per cent. greater than in 1860. Cost of producing a ton of iron, 150 per cent. greater in 1865 than in 1860. Cost of fuel, 300 per cent. greater.

"Agricultural products have increased from 200 to 300 per cent.

"Cost of labor, carefully ascertained by some of our members visiting Europe in the summer of 1865, is only one-fifth to one-fourth of the cost in Pittsburgh of the same work. Foreign competition checks the growth and improvement of our mills, renders our business uncertain and dangerous, from efforts of foreign makers to crush our competition.

"Mills producing from 8,000 to 9,000 tons, pay from $375,000 to $475,000 in wages.

"In 1860, the wages would have been $150,000 to $175,000.

"In our opinion, no estimate can be made of our payments to internal revenue until a settled policy is indicated, and encouragement to capital offered to make permanent investments, preventing evils referred to, giving steady and remunerative employment to skilled labor.

"Foreign articles have no advantage in our markets except price.

"We need protection sufficient to cover foreign low wages and cheap capital, and our own tax.

"Pig iron has been delivered free on board, in Scotland, for $12 per ton, rails $23 to $30, and bar iron $35 to $37, within 90 days, in British ports.

"If gold should come to par without increase of duties, wages must come to foreign standard, or our manufacturing must cease, as internal tax more than overcomes all protection of the tariff.

"Average profits for the last five years, from 5 to 8 per cent.

"Provisions consumed by our operatives come from Western, Northwestern, and Southwestern States.

"Price of farm and garden land in our vicinity, from $200 to $2,000 per acre.

"Land has risen, when rolling mills were started in 1862, from $25 to $50 per acre to $400 to $500 per acre.

"Our markets are in Northern, Northwestern, and Southern and Southwestern States; and, without foreign competition, would be in extreme Eastern and Southern States.

An establishment capable of producing in the *United States* ten thousand tons of finished iron per annum, would cost for ore, leases, lands, blast furnaces, mills, houses, and appurtenances necessary for the full equipment, from the ore to the finished iron, at the present time	$1, 250, 000
Capital to carry it on in all its branches	750, 000
	2, 000, 000

A similar one in *Great Britain* costs over	$500, 000
Capital to carry it on would be	300, 000
	800, 000

Interest on $2, 000, 000 capital invested in American establishment, @ 8 per cent	$160, 000
On $800, 000 in English, @ 5 per cent	40, 000
Leaving a balance of interest of	120, 000

against the American manufacturers.

"This is equal to $12 per ton on the amount made, or 15 per cent. net profit upon the sum invested in the English iron works; an amount of interest satisfactory to English manufacturers, and which would justify them in large investments.

"In addition to this great advantage held by European manufacturers against the industry of the United States, the rate of wages is another heavy item against the productive interests of this nation.

"In the *United States*, a fair average cost of producing pig iron is not less than (per ton)		$35 00
Waste in converting it into finished merchant bar is		8 75
Cost of manufacturing one ton of finished iron, including the cost of coal, as shown by the books of our manufacturers, is not less than		52 00
Excise tax upon 1¼ ton pig	$3 36	
" " 1 ton average finished	4 80	
" " coal used	48	
		8 64
Total		104 39

"In *England* or *Wales*, the cost of producing 1 ton of pig is from $12 to $16, or an average of	$14 00
Add ¼ ton of pig, to give sufficient to produce 1 ton of iron	3 50
The cost of manufacturing 1 ton of iron, including incidental expenses, is, as near as can be estimated, from £3 10*s.* to £4, or say	20 00
Total	37 50

Total American iron	$104 39
" English iron	37 50
Total difference	66 89

"To the difference shown by the figures given, it is just to add the difference per ton caused by larger interest on the greater capital invested in the United States to operate an establishment capable of yielding 10,000 tons per annum.

"This difference of $12 per ton, added to the $66 89, makes $78 89, the total amount that iron can be produced more cheaply in Great Britain than in this country.

"To equalize this great advantage in favor of foreign capitalists and foreign industrial interests, there are two avenues open. The one is to reduce the whole system of labor in the United States to the standard of that of Europe, to bring the rates of interest on capital to the same percentage, and place our industrial classes on the same level with those of foreign manufacturing nations. The other is to sustain the American operatives upon their more elevated position; to preserve to capital that wider range of interest which induces it to greater activity in the development of the resources of the country; to maintain the true spirit of republicanism by providing for the prosperity and progress of the masses, not the enrichment of the few, by such protective duties as will place the products of European labor at the same cost in the United States as those resulting from the skill and strength of American operatives.

"In our opinion, the latter course must be adopted, if the immense raw materials of the nation are by any system of manufactures to be made valuable. The mountains of minerals underlying the soil of the United States are worthless, save so far as the hand of labor gives them value. They rest where placed by the hand of the Creator, without force in the progress of the world, until they for whose comfort and whose progress they were designed by the Almighty, obeying his great command of labor, adapt them by the sweat of their brow to the supplying of daily bread.

"Through whatever transmutations the raw material passes, by aid of whatever machinery, *labor* is the great agent.

"The labor of the United States, as already shown, is in a position so entirely different from that of Europe, that in its exertions to give value to the minerals of the country, it can only do so under greater cost of living than in foreign nations. Therefore it is that we ask protection against all the products of all nations, and all things that will tend to crush the energies of this country, and because we believe that of right the market of each nation belongs to its own laborers."

Table showing the quantity of iron made in Great Britain and France; quantity imported into the United States; price in Great Britain and United States; British and American import duties, &c.

Years.	Quantity of iron made in Great Britain.	Quantity of iron exported from Great Britain.	British iron of all kinds exported to the United States.	Pig iron imported from Great Britain into the United States, and the duty.		Price of pig iron per ton.		Bar iron imported from Gt. Britain, and prices in Great Britain.		Average price of common English bars in New York.	British and American import duties on bar iron.			Pig iron made in France.	Rails imported into the United States.	Duty.	Price of rails per ton.	
	Tons.	Tons.	Tons.	Tons.	Duty per ton.	In Great Britain.	In U. States.	Tons.	Prices.	Per ton.	British. Per ton.	United States. Per ton.		Tons.	Tons.	Per ton.	Welsh. In England.	American. In U. S.
1810...	291, 612	...	...	...	...	$33 to $43	...	...	$67 to $72	...	...	...	...	...	...	...	...	...
1811...	...	...	...	...	...	33 to 43	...	...	67 to 70	...	$30 25	...	...	...	...	...	...	...
1812...	...	57, 791	5, 339	...	...	33 to 43	...	...	61 to 67	...	30 25	...	...	...	...	...	...	...
1813...	...	...	...	...	...	33 to 43	...	...	58 to 6[illegible]	...	31 16	...	...	...	...	...	...	...
1814...	...	57, 019	...	...	...	33 to 43	...	...	62 to 67	...	31 16	...	...	...	...	...	...	...
1815...	...	79, 596	21, 501	...	...	33 to 43	$60 00	7, 615	53 to 66	...	31 16	...	...	...	...	...	...	...
												Hammered.	*Rolled.*					
1816...	...	72, 244	21, 634	*316	...	33 to 43	60 00	7, 245	42 to 55	...	31 16	$9 00	$30 00	...	...	...	...	...
1817...	...	91, 561	10, 725	*1, 099	...	33 to 43	50 to 55	2, 847	40 to 63	...	31 16	9 00	30 00	...	...	...	...	...
1818...	300, 000	105, 724	13, 373	*811	$10 00	33 to 43	42 to 45	3, 302	50 to 61	...	...	15 00	30 00	114, 000	...	...	...	...
1819...	...	82, 546	8, 251	*164	10 00	33 to 43	40 to 42	2, 464	50 to 57	...	31 20	15 00	30 00	...	...	...	...	...
1820...	368, 000	91, 766	8, 199	*676	10 00	38 to 43	40 00	4, 280	46 to 53	...	31 20	15 00	30 00	...	...	...	...	...
1821...	...	101, 683	9, 502	*768	10 00	29 to 36	40 00	2, 028	42 to 46	...	31 20	15 00	30 00	...	...	...	...	...
1822...	...	103, 756	15, 835	*1, 418	10 00	29 to 33	40 00	5, 152	35 to 42	...	31 20	15 00	30 00	...	...	...	...	...
1823...	452, 066	107, 600	13, 841	*2, 744	10 00	29 to 32	42 00	3, 169	33 to 35	...	31 20	15 00	30 00	...	...	...	...	...
1824...	...	95, 500	11, 781	*408	10 00	29 to 53	40 00	3, 050	38 to 62	...	31 20	18 00	30 00	194, 636	...	...	...	...
1825...	581, 367	69, 828	13, 037	*924	10 00	53 to 58	45 00	3. 773	49 to 67	$105 01	7 20	18 00	30 00	195, 588	...	...	...	...
1826...	...	85, 985	12, 491	*1, 745	10 00	31 to 48	50 00	3, 412	38 to 49	91 58	7 20	18 00	30 00	202, 756	...	...	...	...
1827...	690, 500	104, 726	21, 855	*1, 952	12 50	31 to 39	40 00	8, 007	42 to 46	85 60	7 20	18 00	30 00	213, 175	...	...	...	...
1828...	703, 184	112, 365	22, 685	*3, 050	12 50	26 to 39	40 00	8, 561	33 to 38	79 87	7 20	22 40	37 00	217, 604	...	...	...	...
1829...	...	121, 002	17, 387	*1, 319	12 50	24 to 31	40 to 45	7, 006	29 to 33	85 44	7 20	22 40	37 00	213, 868	...	...	...	...
1830...	678, 417	130, 417	21, 330	*1, 124	12 50	24 00	40 00	...	27 to 31	74 93	7 20	22 40	37 90	222, 965	...	...	...	...
1831...	...	139, 577	41, 452	*6, 948	12 50	23 to 24	40 00	...	27 to 29	82 85	7 20	22 40	37 00	221, 423	...	...	...	...
1832...	...	162, 837	45, 436	*8, 195	12 50	23 to 26	45 00	14, 871	27 to 29	72 37	7 20	22 40	37 00	225, 660	...	...	...	...
1833...	700, 000	179, 312	62, 253	*9, 557	10 00	19 to 33	45 00	27, 230	29 to 36	74 74	7 20	18 00	30 00	232, 559	...	...	...	...
1834...	...	174, 441	47, 676	*10, 072	9 47	24 to 26	40 to 45	18, 410	33 to 37	71 70	7 20	17 22	27 77	265, 028	...	...	...	...

1835...	1,000,000	219,203	63,012	*12,687	9 47	21 to 26	40 00	29,124	33 to 38	69 04	7 20	17 22	27 77	290,378	......	......	......	......
1836...	1,200,000	213,428	91,387	*13,218	9 34	30 to 38	48 to 50	48,811	38 to 56	94 02	7 20	17 00	26 00	203,739	......	......	......	......
1837...	......	207,623	54,120	*12,199	9 00	23 to 31	55 00	29,863	37 to 53	95 06	7 20	17 00	26 00	342,500	......	......	......	......
1838...	......	271,312	78,039	*12,658	8 59	29 to 30	40 00	48,594	46 to 58	88 02	7 20	16 00	24 00	......	......	......	......	......
1839...	1,347,790	269,088	85,171	*12,507	8 59	29 00	37 00	54,509	46 to 51	88 43	7 20	16 00	24 00	......	......	......	......	......
1840...	1,500,000	268,328	......	*5,515	7 60	20 00	29 to 35	32,828	40 to 56	75 00	7 20	15 00	21 00	......	29,092	......	......	......
1841...	......	......	......	......	7 60	20 00	29 to 33	......	40 to 45	68 16	7 20	15 00	21 00	......	23,253	......	......	......
1842...	......	......	......	......	5 31	16 50	25 to 29	......	34 00	57 91	......	13 00	14 50	......	24,970	......	......	......
1843...	......	†353,543	......	‡3,882	9 00	......	25 to 28	6,103	23 44	56 54	......	17 00	25 00	......	9,654	$25 00	......	......
1844...	......	†349,875	......	‡14,944	9 00	......	25 72	22,314	26 87	60 60	......	17 00	25 00	......	15,577	25 00	......	......
1845...	1,512,500	......	......	‡27,510	9 00	......	29 25	29,376	41 22	74 68	......	17 00	25 00	......	21,812	25 00	......	......
1846...	......	......	......	‡24,187	9 00	......	27 81	18,211	43 50	78 71	......	17 00	25 00	......	5,897	25 00	......	......
						§$19 65												
1847...	1,999,608	......	......	‡27,655	9 00	......	30 21	26,642	45 47	74 29	......	30% ad val.		......	13,536	30% ad val.	......	$69 10
1848...	......	......	......	‡51,632	30% ad val.	......	26 50	52,095	32 13	59 06	......	30 "		......	29,489	30 "	......	62 25
1849...	......	......	......	‡105,632	30 "	......	21 02	104,294	28 13	43 38	......	30 "		......	69,163	30 "	......	53 88
1850...	......	......	295,521	‡74,874	30 "	......	20 82	105,915	26 68	41 87	......	30 "		......	142,036	30 "	$24 12	47 83
1851...	......	......	343,223	‡67,249	30 "	$10 02	21 38	65,676	25 90	37 33	......	30 "		......	188,625	30 "	25 61	45 60
1852...	2,701,000	......	343,269	‡91,873	30 "	10 09	22 63	45,761	29 25	38 64	......	30 "		......	245,625	30 "	30 49	48 43
1853...	......	†992,995	518,000	‡144,227	30 "	10 24	36 07	88,358	43 85	61 17	......	30 "		......	298,995	30 "	41 99	77 23
1854...	3,585,906	†914,491	506,508	‡160,483	30 "	17 05	37 16	45,551	48 25	70 04	......	30 "		......	282,866	30 "	38 88	80 08
1855...	......	†832,768	342,831	‡98,924	30 "	16 19	27 74	95,141	43 50	58 54	......	30 "		750,000	427,516	30 "	35 80	62 90
1856...	3,586,377	†1,116,845	385,899	‡59,011	30 "	14 83	27 18	91,579	44 86	58 72	......	30 "		......	155,495	30 "	37 28	64 33
1857...	3,659,447	†1,188,617	332,100	‡51,794	30 "	‖12 30	26 35	69,875	41 22	55 14	......	30 "		......	179,305	30 "	37 70	50 00
1858...	3,456,064	†1,050,454	......	‡41,985	24 "	‖10 09	22 19	52,657	41 15	48 11	......	24 "		......	75,745	24 "	30 62	50 00
1859...	......	†1,145,689	243,583	‡72,547	24 "	‖10 32	23 32	81,902	42 80	45 37	......	21 "		......	69,965	24 "	30 21	49 53
1860...	......	†1,107,470	327,870	‡74,497	24 "	‖10 83	22 17	134,199	42 00	42 43	......	24 "		896,200	122,474	24 "	26 71	47 95
1861...	......	†1,024,453	260,146	‡110,025	$6 00	‖10 00	20 09	77,968	38 19	44 02	......	24 "		......	74,490	$12 00	25 05	42 38
1862...	......	†1,074,585	53,236	‡22,147	6 00	‖10 56	23 92	24,250	36 98	59 00	Free..	$15 00 per ton.		......	8,488	12 00	25 92	41 73
1863...	4,510,040	†1,247,503	144,160	‡31,007	6 00	‖11 25	35 24	64,210	37 18	73 57	Free..	17 00 "		......	17,088	13 50	29 07	76 84
1864...	......	†1,145,909	347,317	‡102,223	6 00	‖11 13	59 22	96,380	39 61	......	Free..	22 40 "		1,166,600	148,714	13 50	36 47	126 02
1865...	......	......	159,815	‡41,601	9 00	‖10 64	46 25	40,512	37 00	......	Free..	22 40 "		1,168,300	74,702	¶13 44	33 10	98 62

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* Exclusively from Great Britain.

‡ Nearly all from Great Britain.

‖ Average yearly prices in Glasgow, mixed Nos. f, o, b.

† These quantities include only bar and bolt, merchant bar, rails, and pig.

§ Average price in London during whole period from 1843 to 1850, both inclusive.

¶ 60 cts. per 100 lbs., act of July 1, 1864. Present duty, $15 68, being 70 cts. per 100 lbs.

REPORT ON STEEL.

All that has been or can be said of the importance of the domestic manufacture of iron is equally applicable to the domestic manufacture of steel. There is, perhaps, no circumstance connected with the progress of our home manufacture upon which we have more reason to congratulate ourselves than upon the complete and extraordinary success which, within a few years, has crowned the efforts of those who are engaged in this business. The attempt to make a high quality of steel has been continuous for for more than thirty years. Much toil of brain and hand have during that time been thus expended, and large sums of money have been sunk. We now see the fruit, though, as often happens, it has not rewarded the pioneer. Whether the success is due to the great necessities and demands of war, or to the results of discoveries and experience occurring previous, cannot, perhaps, be fully known; but certain it is, that but five or six years since, many of the best informed on such subjects doubted whether we should not always be indebted to foreign mines and foreign labor for steel. Now, no one who is well informed has a doubt that our country has nearly emancipated itself from such dependence, and is secure of a full supply of the best qualities of steel in peace and war, and for all the demands and exigencies of industry. It is fully demonstrated that the requisite qualities of iron are found within our boundaries, that the requisite skill and knowledge is now attained, and that the requisite confidence in American cast steel and common steel is now established. It has been tried throughout all the manufacturing States by the most skilful manipulators of steel in fine cutlery, edge tools, in both heavy and delicate machinery, and the evidence of its success is complete and irrefutable. *Testimony on that subject* will be submitted with this report, which cannot fail to carry conviction to all friends of domestic labor, and to satisfy them that American perseverance and ingenuity has triumphed in the production of the highest quality of cast steel, an object vitally important to the progress of national industry.

While there remained a doubt as to our having attained the art of making steel of the best quality in this country, or of our having the material of which to make it, our dependence on England for a supply might be endured as an evil without remedy; but now, as it has been demonstrated that we have abundance of iron adapted to the manufacture of this indispensable aid to industry, not an hour should be needlessly lost in establishing this branch of production, not only in the safest but the strongest position that legislation and public favor can place it. Our manufacturing system, our national defences, cannot afford to be dependant upon England for steel any more than for iron. Our metal should not be less reliable than that of those who are our competitors and rivals in manufactures, and who may be our enemies in war. The importance of steel is evinced by the proverb, "true as steel," which is thus made the emblem of truth and faithfulness. If this country shall only be as true as steel to one of its highest interests, it will seize the present opportune occasion to place its manufacture upon a basis which cannot be shaken nor endangered. It needs only the home market to give it this position of safety and success. The permanent progress of that industry to which the country looks for its internal revenue, is not less indebted to steel than to any other other agency placed in the hands of labor.

From answers under oath to interrogatories propounded by the Commission to JAMES PARKS, Esq., of Pittsburgh, of the highly respectable firm of Park, Brother & Co., we take the following statement and figures in regard to the manufacture of steel, its prices, and the cost of labor in England and the United States:

“The grade of steel we are now (1865) selling in Pittsburgh for 13 and 15 cents per pound sells at 6 and 7¼ cents in Sheffield, England. The grade of hammered steel we are now selling in Pittsburgh at 19 cents per pound sells at 11 cents in Sheffield, England, and is sold in this country at from 14 to 15 cents per pound in gold.

The rates of wages paid by the cast steel-manufacturers in the year 1860 were as follows:

For puddling	a ton of 2,000 pounds	$4 20
“ rolling	“ “	55
“ heating	“ “	55
“ heater's helper	“ “	18
“ catching	“ “	30
“ straightening	“ “	25
“ converting	“ “	1 90
“ converters' helpers	“ “	85
“ shearing and steel breaking	“ “	60
“ mixing	“ “	40
“ melting	“ “	4 50
“ pulling out	“ “	2 50
“ moulder	“ “	1 50
“ coker	“ “	1 50
“ chipping ingots	“ “	54
“ hammering to finished bar	“ “	21 00
“ inspecting	“ “	2 10
“ laborers	“ “	90
“ porterage	“ “	75

Cost of labor per ton of 2,000 lbs. delivered at Pittsburgh warehouse in 1860 .... $45 07

Cost of fuel and crucibles in Pittsburgh in 1860:

For 320 bush. coke to ton of 2,000 lbs. finished steel	@ 4c.	12 80
“ 190 “ coal “ “ “ “	@ 4½c.	8 55
“ 12 “ charcoal “ “ “ “	@ 7c.	84
“ 15 crucibes “ “ “ “	@ 1 80c.	27 00

Cost of labor, fuel, and crucibles per ton of 2,000 lbs. of cast steel in 1860 .... $94 26

"The rates of wages paid at our works during the year commencing August 1, 1864, and ending August 1, 1865, were as follows. The same rates are now being paid. Our business year ends on the 1st of August, and we therefore give you figures taken from our books from our last year's business:

For puddling	a ton of 2,000 pounds	...	$7 33
" rolling	" "	...	1 12
" heating	" "	...	1 12
" heater's helper	" "	...	37
" catching	" "	...	63
" straightening	" "	...	50
" converting	" "	...	3 50
" converters' helpers	" "	...	1 40
" shearing and steel breaking	" "	...	1 25
" mixing	" "	...	85
" melting	" "	...	5 50
" pulling out	" "	...	3 50
" moulder	" "	...	2 00
" coker	" "	...	2 00
" chipping ingots	" "	...	1 20
" hammering to finished bar	" "	...	24 00
" inspecting	" "	...	3 10
" laborers	" "	...	1 70
" porterage	" "	...	1 25

Cost of labor per ton of 2,000 lbs. delivered at Pittsburgh warehouse, 1846–5 .... $62 32

Cost of fuel and crucibles in Pittsburgh in 1864–5:

For 320 bush. of coke to ton of 2,000 lbs. of finished steel	@	11½c.	$36 80
" 190 " coal " " " "	@	12¾c.	24 22
" 12 " charcoal " " " "	@	16c.	1 92
" 15 crucibles " " " "	@	3 20c.	48 00

Cost of labor, fuel, and crucibles, per ton of 2,000 lbs. of cast steel in 1864–5 .... $173 26

"Thus it is seen that the amount of labor, fuel, and crucibles in 1860 was $94 26 per ton of 2,000 lbs., whilst the cost of the same in 1864–5 was $173 26, showing that these items alone cost $79 per ton of 2,000 lbs. more in 1864–5 than they did in 1860.

As we were not engaged in the steel business in 1860 we are consequently without any reliable data to enable us to arrive at correct figures as to the full cost of manufacturing cast steel in that year, but we will proceed to give you the cost per ton, incurred from interest, salaries, repairs, rents, and expense, adding excise tax, which will show the whole cost incurred in manufacturing cast steel in 1864–5:

Cost of cast steel in 1864, 1865.

Cost of labor, fuel, and crucibles	per ton of	2,000 lbs.	$173	26
" interest account	"	"	23	70
" salaries	"	"	5	80
" repairs	"	"	15	20
" rents	"	"		82
" expense	"	"	30	25
" direct excise tax	"	"	15	00
			264	03
Cost of iron before being worked, and loss on same			70	00
			334	03
Selling price now, 15 to 19c. per lb. average per ton of 2,000 lbs.			340	00
Gain per ton of 2,000 lbs.			$5	97

"In 1860 the description of iron, same as we quote for 1864–5 at $70 per ton, could be purchased at $25, which with loss on same would make it cost, say $28 per ton.

The rates of wages paid by the cast-steel manufacturers in Sheffield, England, in 1865, are as follows. These rates were recently obtained from one of the prominent cast-steel manufacturers of Sheffield whose letter is now in our possession. Upon making careful inquiry from the Sheffield men in our employ, we find their testimony proves the rates we now give as being the prevailing ones paid throughout their native town. We would here mention, that the waste from the pig iron or bloom, to the finished bar of cast steel, is about the same in England as it is in this country, whilst the cost of interest, salaries, repairs, rents, firebrick, and all general expenses is not more than one-half what they are in this country.

"The rates of wages, per ton of 2,000 lbs., paid by the cast-steel manufacturers of Sheffield, England, in the year 1865, are as follows:

	s.	d.			
For puddling	10		@ 24c. to shilling...	$2	40
" rolling	1	4	" " ...		32
" heating	1	4	" " ...		13
" heater's helper		6	" " ...		12
" catching		10	" " ...		20
" straightening		9	" " ...		18
" converting	4	6	" " ...	1	08
" converters' helpers	2	8	" " ...		64
" shearing and steel breaking	1	6	" " ...		36
" mixing	1		" " ...		24
" melting	6	2	" " ...	1	48
" puller-out	5	8	" " ...	1	36
" moulder	3		" " ...		72
" coker	3	10	" " ...		92
" cellar boy		10	" " ...		20
" chipping ingots	1		" " ...		24
" hammering to finished bar	30		" " ...	7	20
" inspecting	3	6	" " ...		84
" laborers	1	8	" " ...		40
" porterage	1		" " ...		24
	£4 1	1		$19	46

Cost of labor per ton of 2,000 lbs., delivered at Sheffield warehouse, in 1865........$19 46

Cost of fuel and crucibles in Sheffield, in 1865, per ton of 2,000 lbs. finished steel:

	s.	d.			
For 320 bushels of coke	15		per ton @ 24c...	20	70
" 190 " coal	10		" " ...	15	60
" 12 " charcoal		8½	per bush. " ...	2	04
" 20 crucibles	1	3	each " ...	6	00

Cost of labor, fuel, and crucibles, per ton of 2,000 lbs. cast steel in England, in 1865........$63 80

"From the foregoing statements it will be seen that the cost of manufacturing one ton of cast steel in Pittsburgh, for the year commencing August 1, 1864, and ending August 1, 1865, embracing the items of labor, fuel, and crucibles only, amounts to $173 26, whilst to the English manufacturer the same items cost but $63 80, being $109 46 upon each ton of 2,000 lbs. of cast steel in favor of the foreign maker. When the item of Government direct excise tax, viz., $15 per ton, is added to the cost of the American steel, the difference will show $124 46 in favor of the English manufacturer.

"Taking one-half the amount for interest, salaries, repairs, rents, and expense, as shown to have cost us in 1864–5, (and we believe the amount would be as near correct as possible,) as being the cost to the English, and leaving the cost of iron out of the question, and a difference is shown in his favor of $162 35 on each ton of cast steel.

"Not being engaged in the business of manufacturing cast steel in 1860, we have no aggregate amount of wages to report for that year.

"Our 'hands' pay' for the year commencing August 1, 1864, and ending August 1, 1865, amounted to $70,251 24. If our works were completed and in full operation, producing their maximum capacity of product, at the present rates of wages, the "hands' pay" would fully, if not exceed in amount $300,000 per annum. And for the items of fuel, crucibles, and iron, would exceed in amount the sum of $870,000 annually.

"9th interrogatory: What testimony can you furnish of the comparative qualities of American and English steel? State to what uses American steel is now applied chiefly.

"Answer: We forward with this paper a number of original letters received from some of the most celebrated edge-tool manufacturers and machinists of this country. From these letters you will notice that the steel of our manufacture is esteemed fully equal in quality to that of the best English makes. American cast steel of the higher grades is now chiefly used in the manufacture of edge tools, drills, machinists' tools, &c., &c., whilst the rolled cast steel of American manufacture is extensively used in the construction of cotton, woollen, agricultural, and other machinery, and is esteemed as being much superior in quality to the English cast steel of similar grades.

"10th interrogatory: What is the present condition and prospects of the steel manufacture in this country, and what does it suffer from foreign competition?

"Answer: The present condition and prospects of the cast-steel manufacture of this country are extremely gloomy. Government and other taxes, high price of material, high rates of interest, &c., about equal in amount the present tariff, and nothing but the present high rate of premium on gold enables some few of the manufacturers of cast steel in this country to keep their "heads above water," whilst it is a well-known fact that many of them, for want of protection against the low rates of wages, low rates of interest, and low cost of materials to the English manufacturer, have "gone under," and their works are now lying idle. The business of manufacturing cast steel in this country is comparatively in its infancy, and consequently "skilled labor" has to be imported, at great expense, from across the Atlantic, until workmen of native growth can be educated to the business. Extreme high rates of wages have to be offered and paid, to induce the foreign skilled laborer to come and make his home in this country.

"12th interrogatory: What would be the effect upon the manufacture of steel if gold were suddenly to come to par?

"Answer: If gold were suddenly to come to par, every cast-steel manufacturer in this country would be compelled to stop his works and allow them to lie idle until Government would give him the protection necessary to enable him to compete with the English manufacturer. We would here take the liberty of saying, that the rates of tariff for the two higher grades, as suggested by the cast-steel manufacturers, as per printed pamphlet accompanying this paper, are, in our opinion, scarcely high enough to enable the cast-steel manufacturer to fully compete with the English manufacturer, and that the hope the American manufacturer of cast steel must live upon is, that should gold go to par, that a material reduction in the price of raw material and labor may soon follow, and that the rates of protection asked for, if obtained, may enable him to carry on the business with profit. If these hopes are realized, we believe that, with the protection asked for and a decline in the cost of raw material and labor, it will not be long ere, by dint of enterprise and improvements for its economical manufacture, aided by native skill, the American manufacture of cast steel will arrive at great perfection in this important branch of business. What is now wanted is sufficient protection until native skilled labor is abundant, and "all will be well."

"14th interrogatory: What losses have you sustained by the fall of prices since the 1st of January, 1863, and what has been the rate of your clear gains in that period on your investment in the works?

Answer: The losses we have sustained by the fall of prices since the 1st of January, 1863, to the 1st of August of the present year, (1865,) amounts to ninety-seven thousand eight hundred and twenty-three dollars and seventy-five cents, ($97,823 75.) The amount of our clear gains from the time we embarked in the business, October 1, 1862, to August 1, 1865, is forty-nine thousand six hundred and twenty-four dollars and twenty-nine cents, ($49,624 29.) Our investment in the works exceeds the sum of five hundred thousand dollars, ($500,000.)

"17th interrogatory: What was the amount of the United States tax on your manufacture of steel in 1863, 1864, and 1865?

"Answer: The amount of the United States tax upon our manufacture of steel in 1863, was $888 16. In 1864, was $7,459 31. In 1865, was, to December 1, $17,822 51. The United States tax upon the capacity of our works, when fully completed, would amount to about $90,000 per annum.

"18th interrogatory: Make any other statement which may throw light on this subject.

"Answer: We believe you will find, in the printed pamphlet accompanying these replies to your interrogatories, about all we could give you calculated to throw light upon the subject in question, and respectfully request you to give it a careful perusal."

The following paper, being that just referred to, prepared for the Commission by James M. Cooper, Esq., of the firm of Hussey, Wells & Co., of Pittsburgh, and signed by the leading manufacturers of steel in the United States, is annexed as a part of this report. Its facts and figures are deserving of the highest confidence, and will endure the closest scrutiny.

Respectfully submitted.

STEPHEN COLWELL.

The manufacture of American Cast Steel has, within the last five or six years, assumed a rank and importance amongst the great manufacturing industries of our country, that its just claims to be considered as an element of national wealth cannot be reasonably ignored, and it should therefore receive its full share of the fostering care of the Government for its support.

That we possess all the appliances, and the ability to produce in this country, steel of every description, from the lowest grade to the very finest quality imported, *made exclusively* from American stock, is now an established fact; demonstrated beyond the possibility of dispute, upon testimony from which there can be no appeal, and which we are prepared to furnish in overwhelming variety and quantity.

Amongst the severest tests of the comparative quality of English and American cast steel, it may be stated, that the celebrated fifteen and twenty-inch guns manufactured by Messrs. Knap & Co., at the Fort Pitt Works, are all bored and turned with tools made exclusively from American cast steel. These gentlemen inform us that its strength is so much greater, that much heavier cuts are taken upon large ordnance, than any English steel will stand. The sabres which have been furnished to our armies by the great establishment of C. Roby & Co., West Chelmsford, and of the Ames Manufacturing Co., at Chicopee Falls, Mass., and others, are likewise made of Pittsburgh steel, in preference to all imported steel.

American cast steel is extensively used in our public and private armories, for the manufacture of bayonets, pistols, carbines, &c. In short, there is no use to which steel can be applied, in which it does not compete successfully as to quality with the best imported brands.

Our increasing production, until checked by the declining premium on gold, has been gradually but surely supplanting the foreign article, and gaining everywhere a preference amongst consumers, on account of its quality; whilst with the protection partially conferred, it was creating a competition at home, which in addition to that from abroad, must always keep down the price to a bare profit upon the cost of its manufacture.

The manufacture of American cast steel received a fresh impetus by the Morrill tariff of 1861, when the duty was increased from 12 per cent. *ad valorem* to a full revenue (not protective) standard by specific rates. This was at a time when the three main ingredients in the conversion of steel were at the peace standard. It was suited to the then existing circumstances of moderate production, and of consequent inadequate supply, being so very reasonable as to disarm opposition even from the importing interest.

The exigencies of the Government, however, in the suppression of the rebellion, required the imposition of a heavy excise upon all manufactures. This was increased from time to time, until it amounted to fifteen dollars per ton upon cast steel, in addition to the income tax of ten per cent. upon the profits.

It may be said that the excise upon American steel was compensated for by a proportionate increase of imposts; but this is not the truth practically, as we shall show that the importation cost per invoice, confines the duty to the two lowest grades, whilst the American article is taxed almost exclusively on the highest, being levied upon the selling price and not upon cost, besides which, no income tax, or its equivalent, is collected from the foreign importer of steel.

At this point, the inquiry is pertinent, why the foreign manufacturer, vending his commodity by his own agent or resident partner in this country, and importing it at its *naked cost of manufacture abroad, in all cases*, passing it by himself or agent through our custom-houses, and sending the proceeds of his sales home in the shape of gold or foreign exchange, or in our national securities, should not be obliged to pay a tax upon his profits, realized from *his sales* of foreign steel, equally with the American manufacturer upon his sales?

Instead of this, the only tax upon his business in this respect, is probably a merchant's license, and possibly a duty upon his agent's salary above $600.

The tariffs of 1861 and 1862 operated so favorably, that until the effects of the war upon the cost of labor and materials began to be seriously felt, the price of cast steel was *actually reduced* in the face of an increased duty. But very soon labor became high, and laborers scarce. Coal and iron, which are labor in another form, advanced largely because of the demand for men to fill our armies, and their consequent withdrawal from the pursuits of industry. Many thousands have perished, and many more thousands are needed to repair the waste and destruction of the war. Iron and labor are therefore fully 100 per cent., and fuel 200 per cent. higher than in 1861, and as no corresponding advance in these elements in the manufacture of steel has occurred abroad, it is obvious that we cannot longer contend with success against foreign competition, without additional protection to secure us from its ruinous effects.

The premium on gold affords a precarions and uncertain protection, without which, however, no American establishment for the manufacture of steel could exist; but compared with the greatly enhanced cost ot every thing entering into the production of steel in this country, it will be seen at once, that the premium on gold is wholly inadequate to sustain us against foreign competition in our own markets.

It cannot be successfully shown, that labor and materials keep pace with the fluctnation between coin and currency, because the former are regulated more by supply and demand, and hence it is a recognized and admitted fact, that the cost of living and the price of materials, are in most instances as great now, when gold commands a premium of but 46½ per cent., as when it was at the highest point, or 175 to 190 per cent. above par.

It is frankly conceded, that when the premium on gold was at the highest rate, the American steel manufacturers were largely benefited by the incidental protection that afforded; new life and energy were infused into the business; new establishments were started, increasing the home competition and production; but full advantage was not taken of this protection by the American manufacturers, who steadily sold their product of best cast steel, because they could afford it, at 10 or 15 cents per pound less than the price of best English cast steel in our markets, and all other descriptions in the same proportion.

Notwithstanding this great disparity in price during the year 1864, the importation of foreign steel appears to have continued without interruption, and the growing wants of this country, and the new and multiplied uses to which steel is being applied, render it morally certain that an increased duty of 50 to 100 per cent. will not materially lessen the imports for some time to come, while it would greatly encourage the manufacture at home, at the same time increasing the revenues both from excise and imposts.

It cannot be successfully shown that an increase of duty on imports would result in a similar advance of price to the consumer of steel. All past experience, on the contrary, in regard to manufactures of iron and steel, proves exactly the reverse. To illustrate this point, we have only to indicate ascertained results upon the entire list of hardware goods, including shovels and spades, scythes and agricultural implements, cutlery, files, axes, saws, edge tools, locks, hinges, wood screws, &c.

In every instance the encouragement afforded by liberal protection in the form of duty, has resulted in supplying the consumer with American goods of superior quality, and at lower prices than the imported articles of the same kind commanded, until the English have finally abandoned the field of competition, and look elsewhere than to this country for a market.

It was this policy that has made New England rich and prosperous, and dotted her territory all over with manufacturing villages and hamlets, for the production, in endless variety, of domestic hardware. The fact is patent to every dealer in foreign and domestic hardware, that importations in that line have been so diminished within twenty years, that, as compared with the enormous production of this country, they sink into utter insignificance.

May we not, then, profit by such lessons of experience for the general good, in respect to the manufacture of steel, as well as to that of articles of inferior value and importance? The same encouragement in regard to the conversion of steel, now that it is shown that our country abounds with iron equal to the best Swedes, and suited to the production of every description of steel, will, when we have *educated the skill at home* necessary to its proper manipulation, give to American cast steel its true position, not only with the consumers of our own country, but it will ultimately contend for a preference over all others, in the markets of the world.

In this connection we are prepared to show, that in the event of a foreign war, our own establishments for the manufacture of steel, if stimulated into full activity by generous legislation, can be speedily made to produce every pound of this indispensable material that may be needed by the Government in the manufacture of arms, as well as for the ordinary demands of trade.

From the *Pittsburgh Quarterly Trade Circular*, for April, 1865, we learn that there was forwarded from that city, by railroad alone, to twenty-one States and Canada, from the 1st September, 1862, to 1st September, 1863, steel in bars and sheets, or in the shape of springs and plow wings, amounting to 7,824,873 lbs., and for the subsequent twelve months to 1st September, 1864, 11,874,202 lbs. There are no ready means of ascertaining shipments by river or consumption at home.

It appears, however, from the Assessors' books for the 22d and 23d districts of Pennsylvania, including the cities of Pittsburgh and Allegheny, that the quantity of steel returned for excise from the 1st September, 1862, to the 30th September, 1864, a period of two years and one month, was as follows, viz: 21,168,000 lbs., paying an excise tax of $97,416 09, and worth at the ruling prices about $4,500,000.

For the year ending July 1, 1864, the Eastern steel manufacturers turned out 7,742,000 lbs. of cast steel, and they claim a present capacity of 35 tons per day.

The capacity of the various steel establishments west of the mountains, all of them at present in and around Pittsburgh, may be fairly estimated at 75 tons a day. The manufacture of puddled steel for rails, tire, &c., is about being commenced in Pittsburgh and Harrisburg on an extensive scale; it is already in successful operation at Troy, New York. And a similar undertaking for the manufacture of steel by the Kelly process from Lake Superior iron, is now being attempted at Chicago and

Detroit, each of which enterprises is well worthy of special regard as a work of national importance.

In the details of steel from the Assessors' books we do not include a large portion which is manufactured into springs, plow wings, &c., and which pays an *ad valorem* rate as manufactures of steel.

The imports of foreign steel, as we have been able to obtain them from the several custom-houses, are as follows, viz:

Baltimore, for two years ending October 1, 1864:

Steel valued at 7 cents per lb. or less, 8,537 lbs., value......	$408
Steel valued over 7 cents and not over 11 cents, 35,987 lbs., value............	3, 433

Philadelphia, for two years ending October 1, 1864:

Steel valued at 7 cents per lb. or less, 2,071,060 lbs., value..	91, 438
Steel valued over 7 cents and not over 11 cents, 1,093,507 lbs., value............	111, 784
Steel valued over 11 cents, 22,084 lbs., value............	2, 494

New York, for one year ending June 30, 1864:

Steel valued at 7 cents per lb. or less, 4½ cents, 14,308,828 lbs............	641, 883
Steel valued over 7 cents and not over 11 cents, 9⅛ cents, 11,057,947 lbs............	1, 098, 380
Steel valued over 11 cents, 25 per cent. *ad val.*, 2,698,093 lbs., estimated............	404, 714

Boston, for one year ending June 30, 1864:

No particulars, except steel of all kinds imported, 5,391,913 lbs., estimated value............	485, 272

Estimated as above, the importation of steel into these four principal ports of entry for 1864 is 35,072,368 lbs., of the value, as passed through our custom-houses, of $2,735,027; while less than two-thirds the quantity of American steel entered for excise in the twenty-second and twenty-third districts of Pennsylvania alone, amounting in twenty-five months to 21,168,000 lbs., is valued at $4,500,000. This great disparity in value arises from the fact that foreign steel is passed at our custom-houses at the simple *cost* of labor and materials used in its manufacture, whilst the excise upon American steel is levied upon the price at which it is *sold* by the manufacturer. All American cast steel for excise now comes under the highest classification, over 11 cents, while, as is shown by the customs returns for the port of New York, more than one-half the whole quantity imported in 1864 is valued at 4½ cents per lb., and entered at the duty levied upon steel at 7 cents per lb., or less.

Taking the quantity of American steel produced by Eastern establishments, as reported by them, at 7,742,000 lbs. for 1864, and adding thereto those of the Western works for the same time, and it seems that our product already amounts to one-half the quantity imported, or one-third the entire consumption of the country.

The proportion of cast steel in the calculations from which our present statements are derived, comprises about two-thirds the whole quantity, and of this, fully one-half is of the finest description, for tools, dies, &c.

Computing the *capacity* of the American works upon the data already given, for three hundred working days, and it would result in 33,000 tons per annum as their present productive capacity.

Since the foregoing details were obtained, we have procured from the assessors the returns of sales of steel, in bars and sheets, as entered for excise in the 22d and 23d districts of Pennsylvania, from 1st September, 1864, to 1st September, 1865, as follows, viz:

TWENTY-SECOND DISTRICT.

	Tons.	*Tax.*
Steel valued at 7 cents per lb. or less...........	None.	
“ “ above 7 cts. and not above 11 cts.	$309\frac{147}{2000}$	$3, 693 22
“ “ above 11 cents per lb...............	$5,307\frac{313}{2000}$	70, 903 80

TWENTY-THIRD DISTRICT.

	Tons.	*Tax.*
Steel valued at 7 cents per lb. or less...........	None.	
“ “ above 7 cts. and not above 11 cts.	$37\frac{1542}{2000}$	453 25
“ “ above 11 cts. per lb.................	$269\frac{1009}{2000}$	3. 493 69
	$5,923\frac{1011}{2000}$	$78, 543 97

The above does not include a large amount of common steel made into springs, plow wings, &c., which pays an *ad valorem* rate of excise.

From these official statements it will be seen that the production of steel in bars, sheets, &c., in the 22d and 23d districts of Pennsylvania alone, is nearly 33⅓ per cent. of the entire importation from abroad, and that taking the reported capacity of our home establishments, we possess facilities for the production of double the entire imports of 1864.

Making every allowance for over-estimates as to our present capacity, we hazard nothing in saying that the American manufacture of steel of all descriptions, can, under proper encouragement, be speedily placed in a position to supply the entire wants of our country in quantity and quality, as well or better than they can be supplied by foreign manufacturers.

There were in the year 1864 no less than thirty-seven establishments in the United States either actually engaged, or preparing for the manufacture of steel in all its varieties. These were divided amongst seven States, as follows, viz: Pennsylvania 14, New York 9, Massachusetts 5, New Jersey 5, Connecticut 2, Michigan 1, Illinois 1. Many of these concerns have discontinued operations for the reason that the business has ceased to be profitable at the present cost of labor and material, and the decreased premium on gold giving the foreign article the advantage.

There has always been what we conceive to be an unintentional discrimination to the injury of the steel manufacture of this country, as compared with that of iron, in the domestic duties levied upon each, notwithstanding the superior claims of the former to greater protection on account of its novelty, and the difficulty attending its introduction amongst the permanent productions of American industry.

To illustrate this point, a single example was selected in the 23d district of Pennsylvania, in the month of November, 1863, by comparing the product and tax paid by a single iron mill, with that of a single steel mill, for the same month, with the following result, viz:

The iron mill produced 762 tons of iron and nail, which was sold for $99,750, paying an excise of $1,230. The steel mill produced 175 tons of steel of all kinds, which was sold for $52,500, paying an excise of $1,688 89, showing that the manufacture of American cast steel *at that date*, was taxed 150 *per cent. more* than the kindred manufacture of iron, with all the advantages of the latter in experienced and skilled labor, educated at home.

But lest it might be supposed that this case was not a fair criterion by which to determine the relative domestic tax paid on iron and steel respectively, the following tables, obtained from the assessors of the 22d and 23d districts, Pennsylvania—commencing with the first operation of the internal revenue laws—are submitted as confirmative or conclusive proof of the facts alleged:

Comparative statement of Iron and Steel returned for excise from assessors' books in 22d and 23d districts of Pennsylvania, from 1st *September,* 1862, *to* 30*th June,* 1864—*one year and ten months.*

Iron in bars, hoops, plates, advanced beyond slabs, cut nails, and spikes:

Weight.	*Value.*	*Duty.*
179,085 tons.	$34,164,700	$262,458 85

Steel in ingots, bars, sheets, or wire:

8,948 tons.	$3,952,960	$77,504 13

Showing that steel, for the first year and ten months of the present revenue system, paid 150 per cent. *ad valorem* more excise than iron.

For the next three months, say from the 1st of July, 1864, to 30th of September, 1864, when the new excise bill went into operation, the results were as follows, viz:

Iron in bars, hoops, plates, advanced beyond slabs, cut nails, and spikes:

Weight.	*Value.*	*Duty.*
25,968 tons	$4,920,471	$88,292 59

Steel in ingots, bars, sheets, or wire:

1,600 tons	$703,096	$19,911 96

Showing that steel under the new excise still paid 58 per cent. *ad valorem* more domestic duty than iron.

The subsequent act increasing the excise 20 per cent. operated equally on both these interests, so that there still exists the large discrimination against the steel manufacture as compared with that of iron exhibited by the table for three months last stated.

We now proceed to show the revenue derived by Government from every ton of steel manufactured in this country.

The figures are obtained from a carefully prepared statement published by order of the American Iron and Steel Association, to which has been added the *indirect tax upon labor*, founded upon the estimates of D. J. Morrell, Esq., of the Cambria Iron Works, as applied to the manufacture of iron rails.

We have adopted the same percentage upon steel, although, from the higher character of the skilled labor employed, it is more than probable the taxes incurred upon the consumption of the latter class of operatives are considerably greater than those upon the former.

The following is intended to show the revenue of Government upon *each ton of rolled or hammered cast steel* made in the United States, under the law as it now stands, viz:

The excise per ton on rolled or hammered steel is..................	$15 00
“ “ “ of blooms used in making steel is..............	3 60
“ “ “ of bar iron “ “	3 60
“ “ on cost of crucibles consumed is..........................	3 00
“ “ on 10 tons coal	60
“ “ on cast iron moulds, castings for repairs, fire brick, oil, &c., used in making one ton of steel is......................	60
The cost of stamps on letters, notes, checks, bills lading, &c.....	60
The indirect tax on labor on same basis as that estimated by D. J. Morrell, Esq., at the Cambria Iron Works, on average value of cast steel, 6 per cent., inclusive of income tax........	23 00
	50 00

From which it appears that the direct and indirect tax paid by the American manufacturer, upon every pound of cast steel produced by *him, amounts* to 2½ cents.

Now for the sake of comparison, take the official returns on page 44 of steel imported into New York, Philadelphia, and Baltimore, giving the quantity under each of the several classifications, and it will be seen that the whole quantity of imported steel amounted to 31,296,043 lbs., which at the present rate of duty will amount to $870,030 38, or 2$\frac{78}{100}$ cents per lb. duty, being about ¼ cent per lb. more duty than the American manufacturer pays in the shape of excise on his production.

Thus it becomes manifest, that in the competition in our own markets between imported and American cast steel, the advantages are all on the side of the foreign article, the difference of ¼ cent in duty being scarcely appreciable, and placing the American manufacturer in a much worse position than he could have occupied under the very lowest free trade tariff ever enacted in this country.

It is no amelioration of this burden to say that the premium on gold, in which the foreign duties are paid, operates as a protection to the American manufacturer.

If this was even true, it is not a legitimate argument, because our legislation on questions involving such grave results, upon the invested capital of our people in manufacturing pursuits, should never be regulated upon any other than a solid specie basis, so that the foundation should be sure, even if the superstructure was occasionally shaken by external causes or fluctuating circumstances.

While we freely admit, that under the present tariff our business would perish, but for the premium on gold, we still contend that upon the whole, this very cause has operated most disastrously upon our interests, subjecting us to sudden inflations of prices, followed by corresponding contractions, without any regard to regularity or discrimination. The result since the war ceased is, that while gold commands a premium of less than 50 per cent., the cost of labor and materials is fully 100 per cent., and of fuel more than 200 per cent. above the prices of 1861, or when gold was at par.

These are not wild or random statements. They are sober and stubborn facts, well known and understood, and requiring no proof to sustain their truth.

In close connection with this branch of the subject, and in order the more fully to elucidate the probable effects of increased duties for the protection of the manufacture of steel in the United States, a brief *resume* of its past history may not be inappropriate.

Common, or blistered steel, and plow and spring steel, have been extensively manufactured in this country for thirty years, the most ordinary descriptions from American iron, and the better sorts from imported or Swedes iron.

During all this period, frequent but ineffectual attempts were made to produce cast steel, until the opinion became very general that we had no iron in this country suitable for being converted into good cast steel.

It was reserved for Pittsburgh to bring about the first substantial and enduring success in the year 1860, and encouraged by our example, numerous establishments have sprung into existence, as already indicated in this paper.

For many years previous to the introduction of American cast steel, the duty on the foreign article was below the revenue standard, being only 12 per cent. *ad valorem*, and the price of best English cast steel continued to range at from 17 cents to 19 cents per lb.

As soon, however, as it was found that the manufacture in this country was likely to be a success, and it was discovered that it was making its way into favor at a little below the English rates, which was necessary in order to induce consumers to forego their prejudice in favor of the foreign brands, the prices of English steel were reduced from time to time, until the best imported cast steel was currently sold at 13 cents per lb., and in some instances as low as 12½ cents per lb.

The low price of labor, materials, and fuel in this country, enabled us still to compete with our foreign antagonists, and to make some progress, in spite of their systematic attempts to crush out this new development of American industry.

So resolute were these efforts for our destruction, that the increase of duty afforded by the Morrill tariff of 1861, which, though specific, amounted to about 25 per cent. *ad valorem*, or 100 per cent. upon the former rates, *assuming the foreign valuation to be the same as before*, that no increase of price was demanded by the importer, and both American and English cast steel continued to be sold at the lowest rates, until the suspension of specie payments created a rapidly increasing premium on gold, and thus compelled a large advance on both descriptions.

English cast steel advanced according to the gold barometer, and the American manufacture sympathized with the advancing tendency of labor, materials, and fuel.

The highest prices reached were in July, 1864, when best English cast steel was sold at 45 cents per lb., with gold at a premium of 170 to 190 per cent. American cast steel of the same quality was never sold for more than 32 cents, the difference being from 13 to 15 cents per lb. in favor of the latter.

Taking the prices at which best English cast steel was sold in this country, for twenty-five to thirty years before the successful introduction of the domestic manufacture, and we find the average price to be about 18 cents per lb.

Add to this price the *premium on gold* or foreign exchange, which we have seen as high as 185 per cent., and then estimate the effect upon prices of the extraordinary demand created by the war for the manufacture of arms, entrenching tools, &c., *for both belligerents*, as well as for the large increase in the general consumption of the country, and it is not a violent presumption that the price of English cast steel would have been greatly in excess of the maximum rate of 45 cents per lb. if we had been left to the tender mercies of *our friends across the water* for a supply of this indispensable material in providing for the national defence.

If we estimate our consumption for the last four years upon the ascertained basis afforded by 1864 as amounting to 187½ millions of pounds, and it is conceded that the prices of imported cast steel, in the absence of all American competition, would have been 15 cents per lb. higher than the average prices paid for American cast steel during that period, of which there cannot be a reasonable doubt, it is clear, that the Government and people of the United States have already been gainers to the extent of not less than twenty-eight millions of dollars by the fortunate introduction of this important manufacture in this country in time to defeat the British monopoly.

The largest consumers of steel in the United States fully appreciate this view of the subject, and some of the most sagacious manufacturers of steel goods have been from the first inclined to encourage the American article, in order to build up a competition that should prevent a foreign monopoly.

As gold declined the prices of steel receded until the present time; that for English being now about 14 to 15 cents per lb. gold, or 20 cents per lb. currency, whilst American cast steel is sold at a fraction less.

The nominal rates always fluctuate downward more or less in the conflict for trade; and the American steel manufacturer now finds himself in a position that a further decline in the gold premium to 30 per cent. would at once arrest the conversion of all the ordinary and medium qualities of cast steel, and a further decline to 25 per cent. would effectually destroy all competition, by putting a stop to the whole manufacture in this country.

Under these circumstances, we ask for such a reconstruction of the rate of duty, and of the several classifications, as will protect us from the ruinous competition of the foreign article, for we have already shown that, practically, the duty on foreign steel in the aggregate does not exceed one-fourth of a cent per pound over the direct and indirect excise upon American steel.

We therefore propose that the duties on imported steel may be adjusted upon a principle, which, while they will afford us substantial protection, will not be deemed unreasonable; nor lessen materially, if at all, the revenues of the Government from this source.

We believe that if the following adjustment and rate of duty were fixed upon, we could continue to maintain the struggle for ascendancy with moderate prospects of success against foreign competition, under all reasonable contingencies; and thus preserve the manufacture of American cast steel in all its branches, until it shall have acquired a substantial foothold, by reason of our having had time to educate our own skilled labor, and to improve upon our present facilities to such an extent, as to defy all attempts from abroad for the destruction of this new and interesting development of our national industry:

1st. On all puddled or blistered steel, or all steel other than cast and shear steel in bars, sheets, plates or coils, a duty of..................	*3 cts. per lb.
2d. On all cast and shear steel, in bars, ingots, sheets, plates or coils, valued at 7 cts. per lb. or less ...	6 cts. per lb.
3d. On all cast and shear steel, in bars, ingots, sheets, plates or coils, valued above 7 cts., a duty of 6 cts. per lb., and 10 per ct. *ad val.*	
4th. On all steel wire, not exceeding ¼ inch diameter, a duty of 6 cts. per lb., and 25 per ct. *ad val.*	
5th. On steel in any form, not otherwise provided vided for..	50 per ct. *ad val.*

These rates will not exceed the present tariff more than the *direct and indirect tax for excise* upon domestic steel, which, as already stated, is about 2½ cts. per lb.

The first class being but one remove from iron, and converted by a very simple and inexpensive process, does not require the same protection as cast steel, which is a very laborious and costly manufacture, especially in the destruction of crucibles, involving also the most skilful treatment in all its manipulations, to secure the best and most uniform results.

The second class includes all the lower descriptions of cast steel, such as machinery and rolled steel, for cutlery, forks, files, &c. Much of this quality will be found to be imported in the *lowest* classification under the present tariff, which is apparent from the fact set forth in the official statements already given, from which it appears that considerable more than one-half the entire foreign importations for 1864 were crowded into this class.

The same remarks apply with equal force to the proper relation between the second and third class in the existing tariff, for it is manifest that all best tool steel of ordinary sizes is now brought into the grade or classification of steel over 7 cts. per lb., and not over 11 cts. per lb., when it was doubtless intended to be included in the highest or third class for duty.

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* Recent events and later information has compelled the manufacturers to change this figure to 4 cents.

By the proposed arrangement of duties, the higher qualities, or what is known as best cast steel, will be brought into the third or highest class, where it properly belongs. The addition of 10 per cent. *ad valorem* on this class, preserving the language and principle of the present tariff, was wisely introduced, to secure a fair increase of duty upon costly descriptions, such as large circular saw plates, &c., on which the specific duty would be trifling, compared with its actual value, but which will thus be taxed for the additional cost conferred, by extra quality, and unusual form or shape.

The above rates we propose shall be modified to conform to any change in the present excise or domestic duty, either by an increase or a reduction thereof, as the judgment of the Commission may deem expedient, in the adjustment of the internal revenue laws.

We are entirely satisfied, that under the classifications of the tariff as now arranged, advantage has been taken, by the *universal practice* of charging foreign steel at the mere *cost of its manufacture* abroad, to enter it for duty at rates not contemplated by the framers of the law.

It certainly never entered into their calculattons that any cast steel would be entered at our custom-houses at lower rates than common bloom iron could be sold for in this country; and yet such is undoubtedly the fact—for it will be seen by the table on page 44, to which we have several times referred, that a majority of the entire importation into the city of New York for 1864, was entered at a cost of 4½ cts. per lb., or $90 per ton of 2,000 lbs.

Without exhausting the subject, we forbear to trespass longer upon your indulgence, by a further array of argument and illustration in support of the necessity of additional protection to the manufacturer of American cast steel.

From what has been stated, it is obvious that while labor, and all the materials (which are but labor after all) entering into the production of steel, are so much higher in this country, it is not possible for us to contend successfully with the cheaper labor and materials employed by our competitors at the present rate of duty.

The protection we require is practically, not so much for the benefit of the manufacturer as for the laborer; and the question to be determined is, whether it is desirable to degrade American labor to the miserable standard of England, France, and Germany, or whether it is better to elevate it by liberal legislation in favor of home industry, so that the working men of the United States may enjoy all the advantages of education and good living, which are denied the unhappy operatives of the workshops of Europe.

All of which is respectfully submitted.

HUSSEY, WELLS & CO.,
PARK, BROTHER & CO.,
SINGER, NIMICK & CO.,
COOK, ANDERSON & CO.,
HAILMAN, RAHM & CO.,
Pittsburgh, Pa.
REITER & CO., *Allegheny, Pa.*
PRENTICE, ATHA & CO.,
Newark, N. J.
WHIPPLE FILE MFG. CO.,
Ballardvale, Mass.
SWEET, BURNEY & CO.,
Syracuse, N. Y.
WALTER, GREGORY & CO.,
Adirondack Works, N. J.
WHEELER, CLEMSEN & CO.,
New York.
JAS. R. THOMPSON,
Jersey City, N. J.
JAS. HORNER & CO.,
Pompton, N. J.